2 UNITED STATES DISTRICT COURT WESTERN DISTRICT OF WASHINGTON AT SEATTLE 3 4 T-MOBILE WEST LLC and 5 INDEPENDENT TOWERS HOLDINGS, LLC, 6 No. 2:14-CV-1455-RSL 7 Plaintiffs, DECLARATION OF T. SCOTT THOMPSON IN SUPPORT OF PLAINTIFFS' AND DEFENDANT'S 8 V. JOINT MOTION FOR ENTRY OF 9 THE CITY OF MEDINA, WASHINGTON, STIPULATED JUDGMENT 10 Defendant. 11 12 T. Scott Thompson declares and states: 13 1. I am a partner of the law firm Davis Wright Tremaine LLP and am counsel for Plaintiff T-Mobile West LLC in this case. I am over the age of 18 years, competent to testify herein, 14 15 and make this declaration on personal knowledge of the facts stated. 2. Attached hereto as Exhibit A is a true and correct copy of the report of Richard Conroy, 16 17 dated May 6, 2015. 18 3. Attached hereto as Exhibit B is a true and correct copy of the Settlement Agreement between T-Mobile West LLC, Independent Towers Holdings, LLC, and the City of Medina. 19 20 Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true 21 and correct. 22 /// 23 ///

THOMPSON DECLARATION IN SUPPORT OF MOTION FOR ENTRY OF STIPULATED JUDGMENT (C14-1455RSL) - 1

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DATED this 14<sup>th</sup> day of May 2015, at Ranchos Palos Verdes, California. T. Scott Thompson 

## THOPMSON DECLARATION EXHIBIT A

## UNITED STATES DISTRICT COURT WESTERN DISTRICT OF WASHINGTON AT SEATTLE

T-MOBILE WEST LLC and INDEPENDENT TOWERS HOLDINGS, LLC;

Plaintiff,

v.

THE CITY OF MEDINA, WASHINGTON

Defendant.

Civil Action No.: C14-1455RSL

## **Expert Report of Richard Conroy**

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**Appendix 1: Richard Conroy Curriculum Vitae** 

## I. Background

1. I am the President of PierCon Solutions, LLC, a New Jersey company specializing in the provision of radio frequency engineering, design and consulting services to the wireless communications industry since 1998. I have twenty-seven years' experience designing complex cellular, PCS and Public Safety communication networks throughout the United States. I have specific training, experience and education in the design of advanced digital wireless networks, including T-Mobile's Second Generation ("2G")¹ network based on GSM, GPRS and EDGE technologies, T-Mobile's advanced wireless networks including its Third Generation ("3G") network based on UMTS (Universal Mobile Telecommunications System) technologies, and its Fourth Generation ("4G")² network using HSPA+ and LTE technology; all networks are operated by T-Mobile in the City of Medina, Washington. T-

<sup>&</sup>lt;sup>1</sup> 2G mobile networks include the GSM (Global System for Mobile Communications) standard that T-Mobile operates with today. Three primary benefits of 2G networks over their predecessors are: (1) phone conversations are digitally encrypted, which protects the security of such communications; (2) 2G systems are significantly more "spectrally efficient," which allows for greater number of users, and for communication of much higher quantities of data using the same amount of radio frequency spectrum; and (3) 2G introduces data services for mobile devices, starting with SMS ("Short Message Service") text messages. Later enhancements to the GSM standard include GPRS ("General Packet Radio Service") and EDGE ("Enhanced Data for GSM Evolution") data services. As a point of reference for the sake of comparison, GPRS is capable of rates up to 80kbps (kilobits per second), while EDGE is capable of rates up to 240kbps, using most compatible handsets. After 2G was launched, the previous mobile telephone systems were retrospectively dubbed 1G. Radio signals on 1G networks are analog and radio signals on 2G networks are digital.

<sup>&</sup>lt;sup>2</sup> 3G/4G technologies offer voice services and more advanced services than 2G while achieving greater network capacity through improved spectral efficiency. Current rates of up to 14.4Mbps are supported by T-Mobile's 3G network and T- Mobile's 4G network utilizing HSPA+ technology with fiber backhaul is currently capable of rates up to 42Mbps (1,000kb = 1 Mb) on the downlink (i.e., transmission of data to mobile devices) and up to 5.8Mbps on the uplink (from mobile device to cell site).

Mobile's 2G and 3G/4G networks are used to provide personal wireless services. A copy of my *curriculum vitae* is attached hereto as Appendix 1.

2. References in this Report to "Medina" are to The City of Medina Washington, the Defendant in this matter. References to "T-Mobile" are to the Plaintiff T-Mobile West LLC, the Plaintiff in this matter. References in this report to "Fairweather Park Site" or "SE02481A" or "Site" refer to Fairweather Park Nature Preserve, 7621 NE 32<sup>nd</sup> Street, Medina WA, which is the proposed location for the wireless facility at issue in this matter. The purpose of this report is to explain and demonstrate T-Mobile's significant gap in service and the need for the Site to provide in-vehicle and in-building residential coverage that support reliable voice and data services in the area surrounding the proposed site. In this report I provide actual drive test data maps to scientifically and reliably demonstrate T-Mobile's significant gap in reliable service in accordance with accepted industry methodology and standards.

### II. Design Objectives & Reliability

- 3. T-Mobile has established design criteria so that its wireless network will provide reliable wireless service to its customers, whether those customers are on the street, in a vehicle, or in a building. Providing reliable service to T-Mobile's customers within vehicles and buildings is critical to provide the quality of wireless service that customers demand and successfully compete with other wireless providers, such as Sprint, AT&T and Verizon Wireless. To meet customer demands, there are three levels of coverage that T-Mobile strives to provide: In-Vehicle coverage, In-Building Residential coverage, and In-Building Commercial coverage. It is important to understand that the levels of coverage do not represent an objective to achieve a higher level of call quality but to maintain a minimum signal strength and hence reliability of service at the mobile handset as the environment changes. As further detailed below, the signal is, by its nature, subject to attenuation depending upon the conditions and characteristics of the area. The following is a brief description of each level of coverage.
- 4. <u>In-Vehicle Coverage:</u> To successfully provide reliable In-Vehicle coverage, a T-Mobile customer should be able to place or receive a call within a vehicle successfully across 95% of

a site's coverage area. In-Vehicle coverage is the minimum level of acceptable coverage within the T-Mobile network in areas with low population and along major highways covering rural areas. One must bear in mind that designing for only the In-Vehicle coverage threshold will typically result in unreliable in-building coverage, and hence customer dissatisfaction. However, since the signal level is stronger closer to the antenna site than further away from the antenna site, there will be some coverage within buildings close to the site. At this time, T-Mobile utilizes the In-Vehicle coverage design in low population density areas within T-Mobile licensed coverage area.

- 5. <u>In-Building Residential Coverage:</u> To successfully provide reliable In-Building Residential coverage, a T-Mobile customer should be able to place or receive a call on the ground floor of a building that is three stories or less in height successfully across 95% of the site's coverage area. In-Building Residential coverage is the mid-level of coverage within T-Mobile network. In-Building Residential coverage is targeted for residential areas and low-rise commercial districts with building heights of three stories or less. This type of coverage will typically provide reliable coverage over the majority of the cell coverage area; however in some areas, and specifically at the outer geographic boundaries of the cell sites' coverage area, coverage will be restricted only to rooms with windows and will likely lead to customer dissatisfaction if customers try to place or receive a call inside a windowless room, cellar or emergency shelter.
- 6. <u>In-Building Commercial Coverage:</u> To successfully provide reliable In-Building Commercial coverage, a T-Mobile customer should be able to place or receive a call on the ground floor of a building that is greater than three stories in height successfully across 95% of a site's coverage area. In-Building Commercial coverage is the top level of coverage within the T-Mobile network at this time. In-Building Commercial coverage is targeted for urban residential centers (high-rise buildings), urban business districts and suburban business centers. Coverage issues may still occur in hard to serve locations such as within elevators and parking structures.

7. <u>Signal Strength:</u> To provide these levels of coverage, T-Mobile has scientifically determined the strength of the wireless signal ("signal strength") necessary to provide In-Vehicle coverage, In-Building Residential coverage, or In-Building Commercial coverage. Because wireless signals are attenuated (i.e. degraded or partially blocked) by obstructions such as trees, automobile windows, automobile sheet metal, and building materials such as wood, brick and metal, a wireless signal must be of sufficient strength in the ambient environment (i.e. outside with no obstructions) to reliably penetrate into automobiles and buildings.

## III. T-Mobile Has a Significant Gap In Reliable In-Vehicle And In-Building Residential Wireless Service.

- 8. T-Mobile has a significant gap in reliable wireless service in the area around the proposed Site. A gap in reliable in-vehicle and in-building residential service currently exists in the vicinity of the Site. Currently T-Mobile is operating on a temporary 45' tall facility at Fairweather Park. The report details that follow demonstrate the inability of the current temporary site, and by extrapolation any other facility of similar height, to remedy the significant gap in service and the reasons why an 80' structure at the proposed location remedies the gap.
- 9. A gap in reliable wireless service, which includes voice and/or data, can occur if there is: (i) a lack of reliable signal, including poor signal quality; and/or (ii) a lack of system capacity. Since T-Mobile operates on a limited number of radio frequencies licensed by the Federal Communications Commission, each wireless facility is capable of handling only a limited number of wireless users at any given time.
- 10. Providing quality in-vehicle and in-building residential voice and data services, with sufficient system capacity and high-speed data rates, is critical to T-Mobile's customers and is essential to T-Mobile's ability to compete effectively with its functionally equivalent competitors.

11. T-Mobile strives to provide all customers with a positive wireless voice and data experience. Simply put, a positive wireless experience includes the customer connecting to the network on their first try, staying connected throughout the call or data transmission, and the customer ending the call or data session when they are ready. For data connections (e.g., internet browsing) the speed is as fast as the technology allows. A gap in reliable service causes a negative experience: customers cannot place calls when they want to; when they are connected, voice call quality does not meet customer expectations or they do not choose when to end the call; or, the call simply drops off (disconnects) without notice. The data experience is not instantaneous or is much slower than the customer requires. This overall customer experience is negative and it is inconsistent with the level of service T-Mobile strives to achieve. Gaps in service such as those present in the City of Medina, Washington are usually associated with poor or unreliable coverage, and thus result in a negative customer experience.

### A. T-Mobile Has a Significant Gap in Reliable Wireless Coverage.

- 12. T-Mobile has a significant gap in service in the vicinity of the Site caused by a lack of reliable in-vehicle and in-building residential coverage. I was able to confirm that T-Mobile has a significant gap in reliable wireless coverage by reviewing actual drive test data.
- 13. Actual drive test data are routinely used by T-Mobile, and the wireless industry, to reliably determine whether there is a gap in service that necessitates the installation of a new site. Drive tests, also known as "Scan" tests, are used to produce maps ("Drive Test Maps"), which demonstrate actual signal levels along roadways that are traveled by specially equipped scan test vehicles. In a drive or scan test, the signals from the surrounding on-air sites are collected by a receive antenna mounted to the roof of the scan test vehicle. The data collected by the receive antenna is then processed by computer equipment within the scan test vehicle. The coordinates and signal strength of each collection point is recorded by the computer equipment and ultimately depicted on a Drive Test Map. Literally thousands of data points are collected during a scan test over the roadways driven by the scan test vehicle to ensure that a complete and statistically relevant number of data points can be evaluated.

#### IV. Existing Coverage Drive Test Data - Baseline

- 14. T-Mobile is currently operating on a temporary 45' facility, identified as "SE08014A", and located approximately 50' from the location of the proposed permanent tower site. On a 45 foot tall pole, the centerline of T-Mobile's antenna (sometimes also referred to as the "rad center") is located at 42.5 feet above ground level. On December 26, 2014, T-Mobile performed a drive test with the temporary site active and inactive. The purpose of this test was to establish a baseline of coverage surrounding the area with and without the temporary facility operating.
- 15. I prepared three-level Drive Test Maps that demonstrate the results of the drive test performed by T-Mobile for the purposes of confirming existing 2G coverage in the area of the Site. I have confirmed that the drive test was performed by qualified personnel, using standard industry practices and methodologies and in a fashion that it is scientifically reliable and repeatable. The green circles, on the three-level map, represent coverage at a "receive signal" level of greater than or equal to –76 dBm, which represents T-Mobile's design criteria for 2G in-building residential coverage. The yellow circles represent coverage at a "receive signal" level between -76 dBm and less than or equal to -84 dBm, which represents T-Mobile's design criteria for 2G in-vehicle coverage. The grey circles represent areas with a receive signal level of less than -84 dBm, which represents a lack of both reliable in-vehicle and in-building residential coverage. All drive test maps provided herein follow this same color coding standard.
- 16. Attached hereto as Exhibit A is a Drive Test Map of T-Mobile's existing 2G coverage without the temporary 45' site operating. The Drive Test Map demonstrates the significant gap in reliable in-building residential and in-vehicle coverage as follows:
  - Hunts Point Road Approximately 0.7 mile
  - Evergreen Point Road Approximately 1.4 miles
  - 77<sup>th</sup> Ave NE Approximately 0.47 mile

- 78<sup>th</sup> Ave NE Approximately 0.47 mile
- 79<sup>th</sup> Ave NE Approximately 0.45 mile

According to the 2010 block Census data, approximately 1,860 people live within the residential in-building gap area.

- 17. Attached hereto as Exhibit B is a Drive Test Map of T-Mobile's existing 2G coverage with the temporary 45' site operating. The Drive Test Map demonstrates the significant gap in reliable in-building residential and in-vehicle coverage as follows:
  - Hunts Point Road Approximately 0.7 mile
  - Evergreen Point Road Approximately 1.2 miles
  - 77<sup>th</sup> Ave NE Approximately 0.35 mile
  - 78<sup>th</sup> Ave NE Approximately 0.35 mile
  - 79<sup>th</sup> Ave NE Approximately 0.35 mile

According to the 2010 block Census data approximately 1,586 people live within the inbuilding residential gap area.

- 18. Exhibit B demonstrates that the temporary site provides a small amount of additional coverage to the area. Specifically the 45' temporary facility covers approximately 274 people with improved residential in-building coverage out of the 1,860 within the gap area, leaving a large portion of the significant gap without adequate coverage. Therefore, Exhibit B demonstrates the existing temporary facility, at a height of 45', is inadequate to provide reliable service to the surrounding area.
- 19. Federally licensed wireless carriers such as T-Mobile have licensed additional spectrum to construct 3G/4G networks to increase system capacity and to meet consumer demand for advanced wireless services. It is necessary for T-Mobile to provide 3G/4G services throughout its federally licensed coverage area in order to provide consumers with the wireless services they demand, and to remain competitive with T-Mobile's functionally

equivalent competitors. In addition, the ability of T-Mobile customers to make an E-911 call from a mobile device is of critical importance for public safety. Reliable 3G/4G service is critical even in cases where some 2G service is present. For example, a customer using a 3G/4G mobile device may not be able to make a call, including an E-911 call, if there is unreliable 3G/4G service. In the event the signal strength is strong enough for the customer's 3G/4G mobile device to lock onto the 3G/4G network, but the signal quality is insufficient to support a call, the network will be unable to support a 3G/4G call and will not hand the call down to the 2G network even if there is reliable 2G service available. Accordingly, it is necessary for T-Mobile to have reliable 3G/4G service in areas that may already have 2G service.

- 20. In contrast to a 2G network, signal strength is not the single most important objective when designing and operating 3G/4G networks; signal quality is of greater importance because the same frequencies are used at each adjoining site. Operating efficient 3G/4G networks requires that signal interference among adjoining sites be strictly controlled.
- 21. I also prepared three-level Drive Test Maps that demonstrate the results of a drive test performed by T-Mobile for the purposes of confirming existing 3G/4G coverage in the area of the Site. The green circles, on the three-level map, represent coverage at a "receive signal code power" level of greater than or equal to –90 dBm and -12 dB Ec/Io, which represents T-Mobile's design criteria for 3G/4G in-building residential coverage. The yellow circles represent coverage at a "receive signal code power" level of greater than or equal to -98 dBm and -12 dB Ec/Io, which represents T-Mobile's design criteria for 3G/4G in-vehicle coverage. The grey circles represent areas with a receive signal level of less than -98 dBm or -12 dB Ec/Io, which represents a lack of both reliable in-vehicle and in-building residential coverage.
- 22. Attached hereto as Exhibit C is a Drive Test Map of T-Mobile's existing 3G/4G coverage without the temporary 45' site operating. The Drive Test Map demonstrates the significant gap in reliable in-building residential and in-vehicle coverage as follows:

- Hunts Point Road Approximately 0.7 mile
- Evergreen Point Road Approximately 1.4 miles
- 77<sup>th</sup> Ave NE Approximately 0.7 mile
- 78<sup>th</sup> Ave NE Approximately 0.35 mile

According to the 2010 block Census data approximately 1,106 people live within the inbuilding residential gap area.

- 23. Attached hereto as Exhibit D is a Drive Test Map of T-Mobile's existing 3G/4G coverage with the temporary 45' site operating. The Drive Test Map demonstrates the significant gap in reliable in-building and in-vehicle coverage as follows:
  - Hunts Point Road Approximately 0.7 mile
  - Evergreen Point Road Approximately 0.68 miles
  - 77<sup>th</sup> Ave NE Approximately 0.32 mile

According to the 2010 block Census data approximately 804 people live within the inbuilding gap area.

24. Exhibit D demonstrates that the temporary site provides, at most, a small amount of additional coverage to the area. Specifically the 45' temporary facility covers approximately 302 people with improved in-building coverage out of the 1,106 within the gap area; leaving a large portion of the significant gap with unreliable signal. Therefore, Exhibit D demonstrates that the existing temporary facility, at a height of 45', is inadequate to provide reliable service to the surrounding area. In addition, as demonstrated by Exhibit D, it is my opinion that a 45 foot tall or shorter facility in the vicinity of the Park, for example in the adjacent Washington Department of Transportation State Road 520 ("SR520") right of way, would not be a feasible alternative to remedy T-Mobile's significant gap.

### V. Drive Test of Proposed Site:

- 25. Another type of drive test, known as a continuous wave or "CW" test, is sometimes performed to help determine the signal levels that would exist if a site were constructed at a particular location and particular height. CW tests are used to produce "CW Test Maps" which demonstrate actual signal levels along the roadways that are traveled with specially equipped CW test vehicles. The CW test is performed by placing a test transmitter and antenna at the specified location and elevation while a CW test vehicle drives the area and collects the transmitted signal via an antenna on the CW test vehicle. T-Mobile performed a CW drive test, on December 4, 2014, of the proposed ("SE02481A") Fairweather Park facility. The CW drive test was performed utilizing a test transmitter connected to an omnidirectional antenna. The antenna was raised to the proposed elevation of 75 feet through the use of a crane located at the proposed site location. The 75 foot height represents the centerline of the antenna and not the top of the tower. So, for example, the 75 foot antenna centerline would be on a 80 foot tall tower. A CW test laptop computer, equipped with industry accepted "TEMS" software, connected to a PCTEL receiver and a GPS antenna was utilized to record the signal and location as a technician drove the surrounding area.
- 26. In order to properly represent the expected coverage from an actual facility, the parameters of the test setup must be compared to the actual site parameters and a correction factor is then calculated to "normalize" the data.
- 27. Test Parameters: The CW drive test was performed utilizing a GSM 200 kHz carrier at the frequency of 1965 MHz. The test transmitter was set to 20 Watts (43 dBm); Power measured at the end of the attached jumper cable was 16 Watts (42.04 dBm) which equates to approximately 0.96 dB of line loss between the transmitter and the antenna. The transmitter was connected to a 5.1 dBi gain omni directional antenna. The effective radiated power of the test setup is therefore: 42.04 (power into antenna) + 5.1 (isotropic gain of antenna) = 47.14 dBm EiRP.

- 28. Actual Site Parameters: Since the CW drive test data collected was based upon a GSM carrier of 200 kHz the site parameters of the GSM network were utilized to develop the correction factor. The GSM site transmitter operates at 40 Watts (46 dBm) and after cable & filter losses of 2.04 dB result in 43.97 dBm of power into the antenna. T-Mobile utilizes a 17.3 dBi gain antenna. The effective radiated power of the GSM system is therefore: 43.97 (power into antenna) + 17.3 (isotropic gain of antenna) = 61.27 dBm EiRP.
- 29. Correction Factor: Since the CW drive test EiRP is less than the actual GSM site EiRP, a correction factor needs to be utilized. Subtracting the drive test EiRP (47.14) from the GSM EiRP (61.27) yields a correction factor of +14.13 dB. The drive test results to follow represent the collected signal plus an additional 14.13 dB to compensate for the power differences between the drive test parameters and actual GSM site parameters.
- 30. I prepared a three-level CW Test Map that shows the results of the CW drive test performed by T-Mobile for the purposes of demonstrating expected coverage from the proposed location. I have confirmed that the drive test was performed by qualified personnel, using standard industry practices and methodologies and in a fashion that it is scientifically reliable and repeatable.

#### A. Drive Test of Proposed Site at 75 Feet Above Ground Level

31. Attached hereto as Exhibit E is a CW Test Map from the proposed site ("SE02481A") location at 75 feet above ground level. The green circles, on the three-level map, represent coverage at a "receive signal" level of greater than or equal to –76 dBm, which represents T-Mobile's design criteria for 2G in-building residential coverage. The yellow circles represent coverage at a "receive signal" level between -76 dBm and less than or equal to -84 dBm, which represents T-Mobile's design criteria for 2G in-vehicle coverage. The grey circles represent areas with a receive signal level of less than -84 dBm, which represents a lack of both reliable in-vehicle and in-building residential coverage. The CW Test Map demonstrates that much of the significant gap in reliable in-building and in-vehicle coverage is remedied as follows:

- Hunts Point Road Provides In-vehicle coverage along entire road (0.83 mi) plus approximately 84% of in-building coverage (0.7 mi).
- Evergreen Point Road Provides in-building coverage for approximately 1.2 miles and filling the 0.1 mile in-building gap on the northern end.
- 77<sup>th</sup> Ave NE In-building gaps filled.
- 78<sup>th</sup> Ave NE In-building gaps filled
- 79<sup>th</sup> Ave NE In-building gaps filled
- Provides coverage to approximately 1,860+ people within the 2G in-building gap area with some small areas of only in-vehicle coverage along Hunts Point Road.
- 32. Exhibit E demonstrates that the proposed site with an antenna centerline at 75' above ground level remedies most all of the significant gap of in-building and in-vehicle coverage in the area of the site.

#### B. Enhanced 911 (E911) Call Data

33. Under federal regulations, T-Mobile is required to provide enhanced 911 services from their respective wireless systems. The service must provide both automatic number information (ANI) as well as automatic location information (ALI). The ability to access the national telephone network for enhanced 911 as well as to meet the FCC requirements regarding location greater significance when taking into account the high number of E-911 calls placed in the area. Between November 2013 and November 2014 there were 670 E-911 calls placed from the immediately adjacent surrounding sites as detailed in Exhibit F attached hereto. It is my opinion that locating the Facility will eliminate a large portion of the gap area and ensure reliable wireless service including E-911 calls.

#### VI. Conclusions

34. It is my opinion that T-Mobile has a significant gap in in-building residential & in-vehicle service caused by a lack of reliable coverage in the area surrounding the proposed Site. It is

also my opinion that the gap in service is significant based on a number of relevant factors in the area surrounding the proposed Site, including: the number of residents that live in the gap area, and the presence of residential uses of single family dwellings within the gap area. Currently operating at the site is a temporary 45' structure. From the existing drive test data, it is clear that a significant gap still exists both with and without the temporary site operating. Therefore, a facility at the existing height of 45' (42.5' antenna centerline) does not meet T-Mobile's coverage objectives or remedy the significant gap in the area.

- 35. A CW drive test was performed utilizing industry standard practices from the subject site at the proposed antenna centerline height of 75'. It is my opinion based on the CW drive test that the proposed antenna centerline height at 75' remedies T-Mobile's significant gap in coverage in the area.
- 36. It is my opinion that approving the proposed tower at 80' above ground level at the proposed Site, with a 75' antenna centerline height, will remedy T-Mobile's significant gap in coverage for both 2G and 3G/4G technologies for voice, data and enhanced 911 calls.

#### VII. Additional FRCP 26(a)(2) Disclosures

37. As further required by Rule 26(a)(2) of the Federal Rules of Civil Procedure, I state as follows:

I have provided RF expert testimony by deposition or in trial in the following cases:

T-Mobile South LLC v. Howard County Board of Appeals Civil Action No. RDB-11-0729

<u>T-Mobile South LLC v. Loudoun County, Virginia County Board of Supervisors, Civil Action No. 11-cv-01201-GBL-JFA</u>

T-Mobile West Corporation v. City of Huntington Beach, California, US District Court Case NO. CV-10-2835 CAS (Ex)

SPRINT SPECTRUM LP and T-MOBILE NORTHEAST, LLC v. The Zoning Board of Adjustment of the Borough of Paramus, New Jersey, US District Court, Civil Action No. 09-04940 (KM) (CLW)

All facts or data that I considered in forming my opinions are contained in this report, identified in the exhibits attached hereto, and set forth below:

- Construction Drawings consisting of 26 pages, prepared by Infinigy Engineering dated 06/24/14;
- Data from T-Mobile obtained by me;
- Drive test data obtained by PierCon and provided by T-Mobile
- MapInfo with 2010 census data overlay on MapInfo drive test plots
- T-Mobile Design Guidelines and Link Budgets contained in UMTS RF Planning Guidelines version 5.3 and 2G RF Planning & Design Guidelines V8;

My compensation for the services provided or expected to be provided in this matter are as follows:

- RF Engineering services related to reviews, conference calls, meetings, site visits, preparation of exhibits and report preparation shall be billed at the rate of \$150.00 / hour.
- Expenses related to travel, lodging and meals reimbursed at cost.
- Expert testimony at trial or by deposition shall be billed at \$1200.00 per day.

Date: May 6, 2015

Richard Conroy

## **EXHIBITS**

## PROPOSED SITE(S) LOCATION AND ADDRESS

Proposed site (SE02481A) is located at 7621 N 32<sup>nd</sup> Street, Medina, WA.

Please reference table below for details and location information on the proposed site.

### PROPOSED SITE INFORMATION

Site Name	Structure Type	Antenna Centerline (ft)	Longitude	Latitude	Sector Orientation
SE02481A	Stealth Light Pole	75′	-122.23790278	47.63764445	60º, 150º, 270º

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### **ON AIR SITES**

On Air Sites Surrounding SE08014A					
Site Name	Antenna Centerline (ft)	Longitude	Latitude	Sector Orientation	
SE01139A	50	-122.30048300	47.64966300	240º, 340º	
SE02480A	82	-122.22608600	47.63670556	50º, 170º, 290º	
SE02204A	40	-122.29171600	47.62600500	150º, 235º, 330º	
SE02225A	249	-122.27620000	47.63388900	100º, 230º, 320º	
SE02227D	44	-122.27638500	47.64078100	0º, 90º, 240º	
SE02618A	32	-122.23042900	47.62276800	40º, 160º, 280º	
SE02619D	49	-122.22780100	47.63168500	50º, 170º, 290º	
SE02622A	90	-122.21396000	47.63037300	0º, 120º, 210º	
SE03872A	26	-122.30182800	47.62774000	45º, 180º, 350º	
SE03873E	38	-122.27751200	47.63440400	240º, 340º	

## ON AIR "Temp" SITE

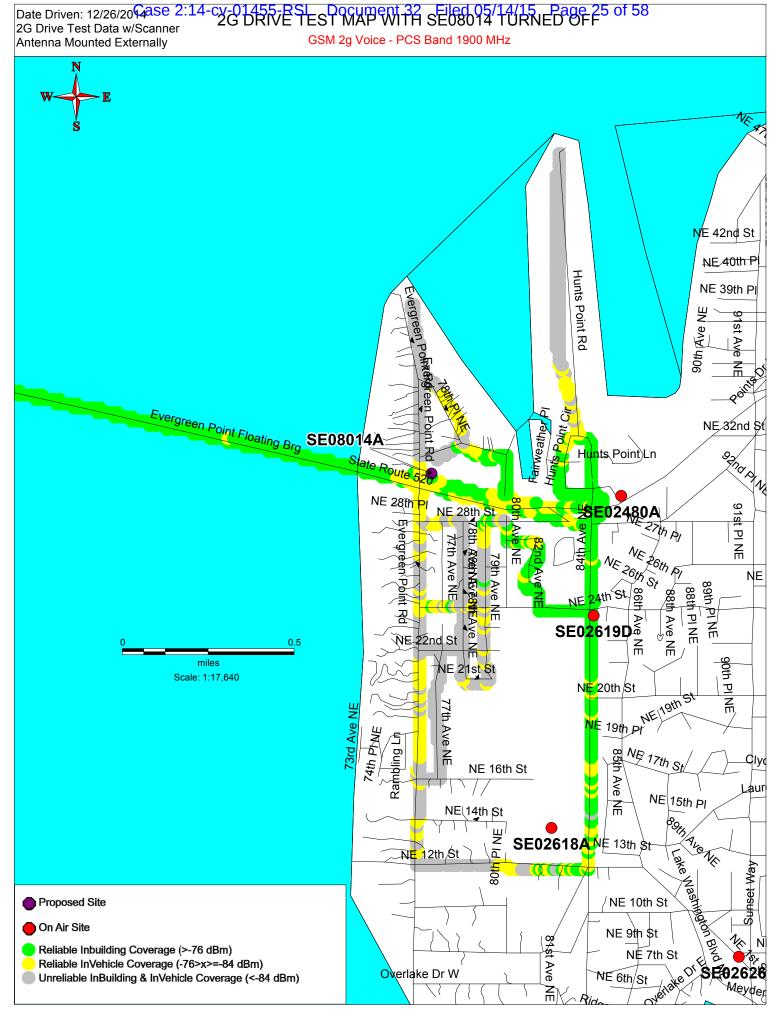
	Antenna			
Site Name	Centerline (ft)	Longitude	Latitude	<b>Sector Orientation</b>
SE08014A	42.5	-122.23790300	47.53776444	60º, 150º, 270º

Note: Currently existing at the site is a temporary 45' wooden pole providing minimal coverage to the area.

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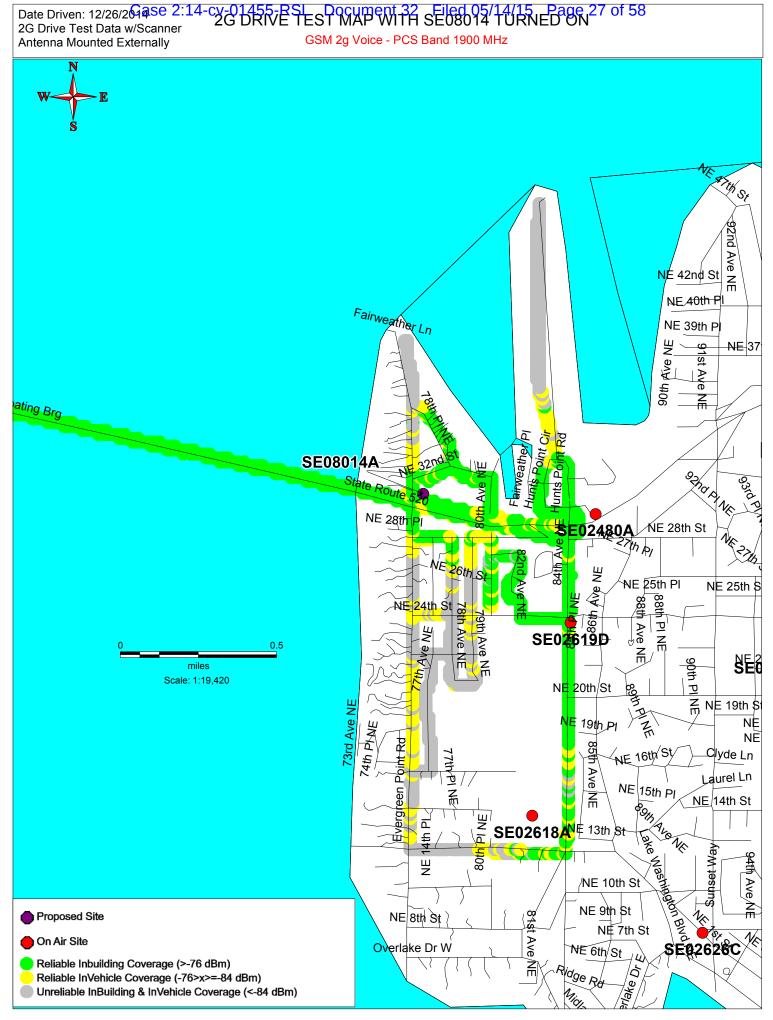
## Exhibit A Existing 2G Drive Test Map Without Temp 45' Site

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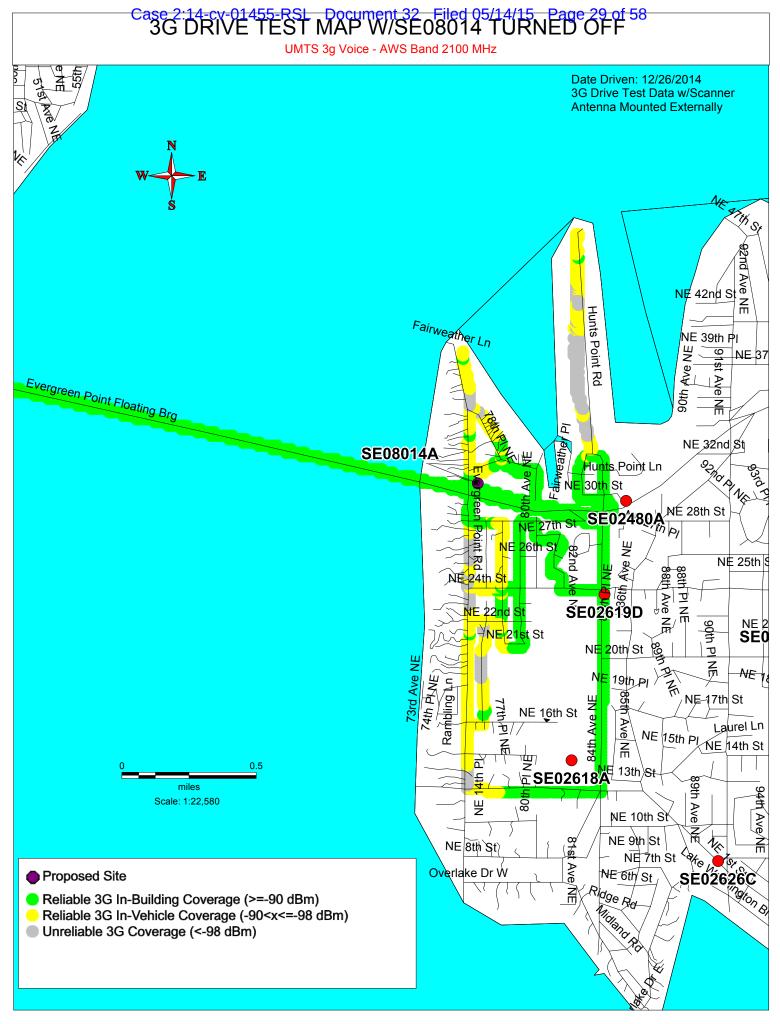
## Exhibit B Existing 2G Drive Test Map With Temp 45' Site

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## Exhibit C Existing 3G/4G Drive Test Map Without Temp 45' Site

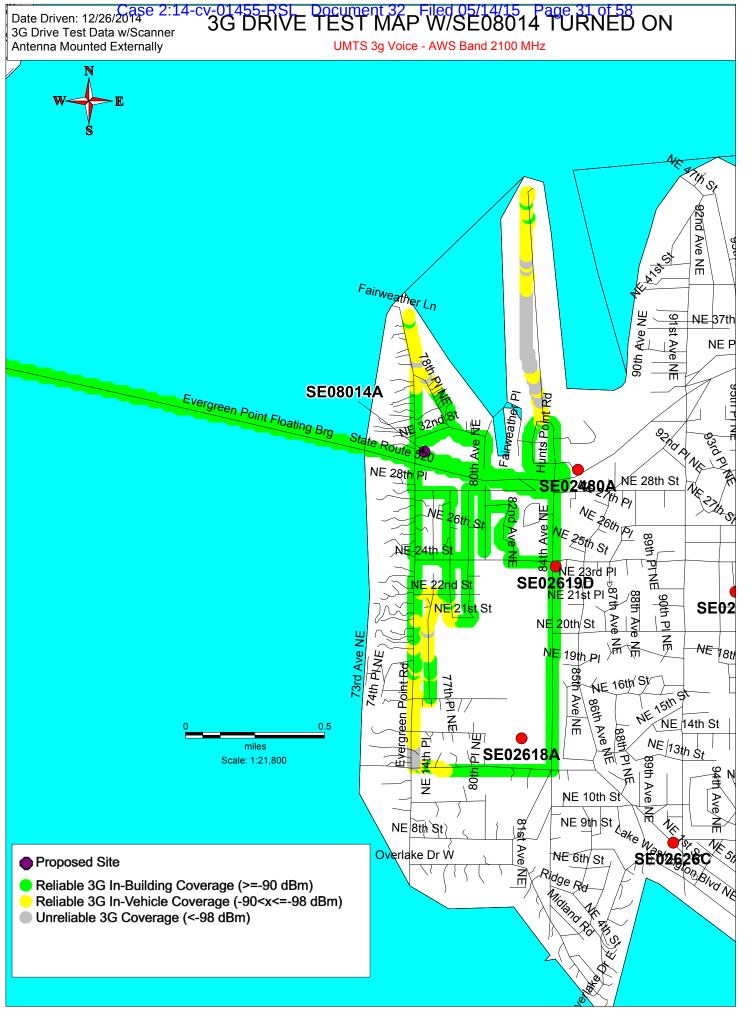
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## Exhibit D Existing 3G/4G Drive Test Map With Temp 45' Site

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## Exhibit E 2G Drive Test Map @ 75'

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### Case 2:14-cv261-65575Page 33 of 58 GSM 2g Voice - PCS Band 1900 MHz Date Driven: 12/04/2014 2G Drive Test Data w/Scanner **Antenna Mounted Externally** EiRP of Test: 47.14 dBm EiRP of Site: 61.27 dBm #7th St Correction Factor: +14.13 dB Ave NE NE 42nd St NE 40th PI Fairweather Ln NE 39th P NE 37 Ave 90th Evergreen Point Floating Brg Fairweather/PI NE 32nd St SE02481A Shap SE02480A N NE 28th NE 28th St NE 25th PI NE 25th 88th Ave NI SE02619D Z E NE 2 90th PI miles NE 20th/St Scale: 1:19,410 73rd Ave NE 금 NE 19th \$ 74th PINE 19th P1 NE ΝÈ Point Rd 85th Ave NE 16th St Clyde Ln 77th P1 Laurel Ln NE 15th PI NE 14th St 4th Pl **SE02618AN** 13th St 94th Ave/NE NE 10th St NE 9th St 8/8 NE 8th St \$E42626C Proposed Site [ Ave/

5/5/2015 Exhibit Page 12 of 21

On Air Site

Reliable Inbuilding Coverage (>-76 dBm)

Reliable InVehicle Coverage (-76>x>=-84 dBm) Unreliable InBuilding & InVehicle Coverage (<-84 dBm) Overlake Dr W

NE 6th/St

lidge Re

Z

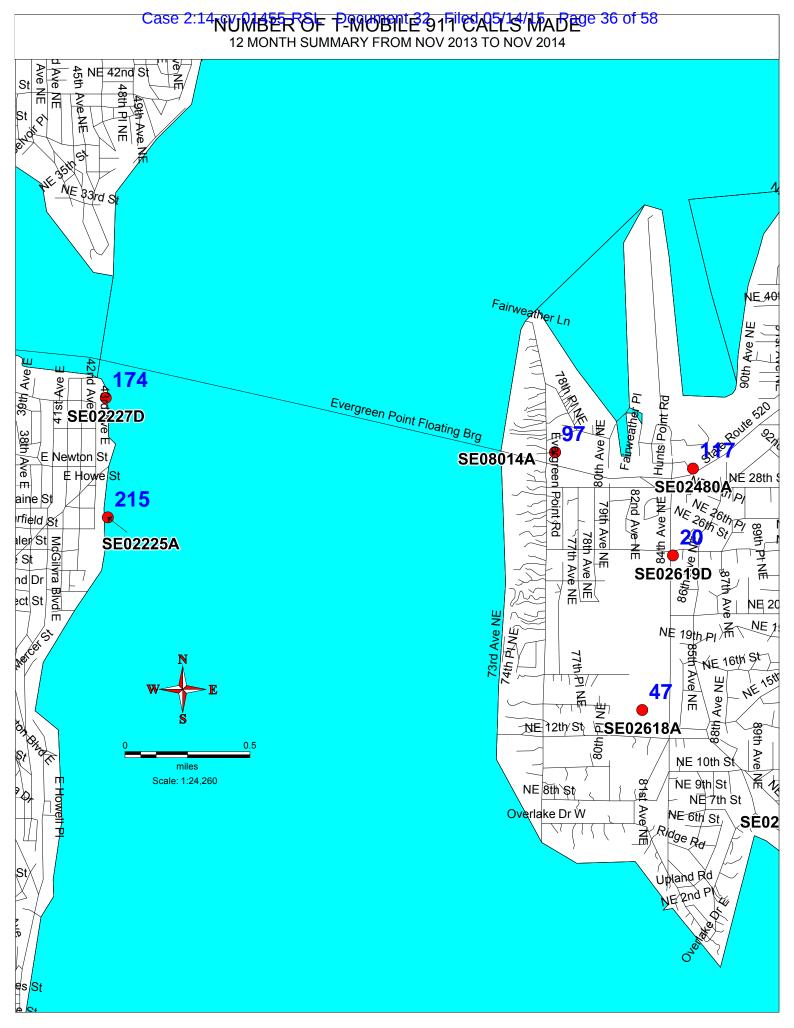
Werlake

# Exhibit F Enhanced 911 Data Chart & Map

5/5/2015 Exhibit Page 13 of 21

## Case 2:14-cv-01455-RSL Document 32 Filed 05/14/15 Page 35 of 58 NUMBER OF T-MOBILE 911 CALLS MADE 12 MONTH SUMMARY FROM NOV 2013 TO NOV 2014

Site Name	Number of E911 Calls
SE02480A	117
SE02619D	20
SE02618A	47
SE08014A	97
SE02227D	174
SE02225A	215



### Appendix 1: Curriculum Vitae

5/5/2015 Exhibit Page 16 of 21



### Richard A. Conroy, Jr.

### **SUMMARY**

Richard A. Conroy Jr. has over twenty years of engineering and executive experience in the wireless communications industry.

Prior to co-founding PierCon Solutions LLC in 1998, Mr. Conroy was employed by Wireless Systems Consulting (WSC) as the Director of Engineering Operations. At WSC, Mr. Conroy was responsible for the design and implementation of New York's first all digital Personal Communications System (PCS). Mr. Conroy provided Engineering Management, design, process development, testing guidelines and expert testimony for Omnipoint Communications.

Prior to his roles at WSC and Omnipoint, Mr. Conroy was employed by Motorola Communications where he positions of Senior Systems Engineer and Lead Engineer for Motorola Communications & Electronics, Inc.

Mr. Conroy holds a Bachelor of Science degree in electrical engineering as well as additional training from Motorola and Wireless Systems Consulting including the following: System Integration Institute, Presenting Technical Information to Customers, Needs Analysis, Managing Technical People, SmartZone, Trunked Simulcast Systems, Secure Communications, Analog and Digital Microwave Design, Dispatch Center Design, ESMR / TDMA, GSM, and CDMA.

As a technical consultant with a solid background in wireless theory and design, Mr. Conroy specializes in providing all aspects of wireless system design, implementation, and project management.

### **STRENGTHS**

- Business Development
- Project Management
- Managing multiple cross-disciplined teams
- MS Project expert
- MS Access
- Implementation
- Cutover Plans
- Process Mapping
- Expert Testimony & Public Presentations
- Land Mobile Radio Systems
- Radio Coverage Standards
- Strategic Planning
- IP Networking / Subnetting
- LAN / WAN system planning
- WiFi / WiMAX
- Microwave Design
- GSM RF Design & Optimization
- Cell Site Testing & Planning
- Tools: RF Prediction Excalibur, Odyssey, Comsite, Aircomm Asset;
- Optimization Network / Performance OptPcs -Metrica KingFisher AIMS Nortel CPT analyzer - NERF

**CORPORATE HEADQUARTERS** 

63 Beaver Brook Rd., Suite 201 Lincoln Park, NJ 07035 973-628-9330 phone 973-628-9321 fax

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### Richard A. Conroy Jr.

- TEMS
- MapInfo
- Technical Platforms: S18000-S12000-S8000-S2000 (Nortel) PCS Digital
- Cellular System GSM. RBS2102 (Ericsson)
- RF Zoning / FCC-FAA Compliance

### RELEVANT EXPERIENCE

### **PierCon Solutions**

(1998 – Present)

### Senior RF Engineer, President/Co-Owner

- Responsible for providing technical consulting services to clients in the wireless industry.
- Provide all aspects of wireless System Design, Implementation and Project Management.
- Expert Testimony provided for T-Mobile, Verizon Wireless, Sprint PCS, Nextel and AT&T Wireless before local zoning & planning boards for the approval of wireless sites. Testimony provided for hundreds of facilities over a seven year period.
- Managed team of engineers performing unlicensed microwave system design for T-Mobile throughout NYC market.
- Responsible for the design of the Sprint PCS CDMA network for the NYMTA from search
  ring release to site commissioning. Defined link budget, issue search rings, evaluate
  candidates, perform design visits, develop antenna system designs, site prediction utilizing
  Planet, drive test evaluation and expert testimony. Solid background in CDMA theory and
  design.
- System needs analysis, design and specification document for numerous local police, fire public safety communication and computer networks.
- Design and facilitate temporary public safety dispatch facilities in anticipation of 9-1-1 and new system cutover.
- Design analog, digital, conventional and trunked public safety radio systems in all four public safety bands.
- Implementation project management and acceptance testing.
- FCC licensing, implementation & cutover plan.

### Wireless Systems Consulting, Inc. Consultant, Director of Engineering Operations

(1996 - 1998)

### Client - Omnipoint Communications

- RF Manager for Manhattan, Brooklyn and Queens.
- Team Leader responsible for the design and implementation of Northern New Jersey.
- Design and Implementation of Omnipoint's 1900 MHz GSM PCS system.
- Lead team of RF Engineers
- Perform RF Expert testimony in front of boards of adjustment and planning boards within New Jersey & New York.
- RF Team Leader for the Region 5, New Jersey RF Design.
- Developed standard operating practices, procedures and processes.
- Lead in development of Omnipoint's corporate wide site management database.
- Performed detailed in-building fiber optic distribution design proposals.
- Implemented in-building fiber optic PCS systems.
- Developed spread spectrum microwave designs
- Develop long and short term system RF design plan.
- Responsible for developing Grid and Frequency Plan.
- Develop Optimization Plans.

5/5/2015 Exhibit Page 18 of 21

### Richard A. Conroy Jr.

### Motorola, Inc. (1992 – 1996) Lead Engineer / Project Engineering Manager (Eastern Division, Glen Rock, NJ)

- Responsible for managing an engineering team that designed and implemented the NYPD radio system enhancement and E9-1-1 project.
- Responsible for the overall project engineering effort of country's largest E9-1-1 system.
- Managed/ authored the test and trouble shooting process.
- Managing the field engineering implementation teams.
- Customer interface for engineering issues.
- Developed detailed schedules and plans for complex audio routing designs.
- Coordinated efforts between Engineering, Product Groups, Deliverables and Staging.
- Directed field engineering with regards to project priorities and goals.
- Awarded Motorola's Eastern Division Salesman of the Year (1995).

### Senior Systems Engineer (1994 – 1995) (Southern Division, Columbia, SC)

- Provide engineering and technical support for the Southern Division.
- Responsible for the design of complex communication systems ranging from analog trunking systems to emerging digital technologies.
- Responsible for design and implementation of statewide SmartZone trunking System.
- Responsible for design of 6 site Astro Simulcast system for Charleston County FD
- Developed Corporate wide accepted MOSCAD technical proposal document.
- Designed 19.2 Mobile Data System.
- Performed Customer needs assessment training to division sales team.

### **Systems Engineer**

(1992 - 1993)

- Managed the presale design of a multi-state MIRS system.
- Responsible for developing the first private ESMR system using Motorola's MIRS (TDMA) technology. Interface between RF and Switch engineers during design phases.
- Managed radio TDMA coverage prediction based on high elevation / high ERP.
- Developed and assigned TDMA RF coverage parameters.
- Developed (TDMA) ESMR technical proposal.
- Designed Hybrid digital/analog 800 MHz (6 site) simulcast public safety trunking system.
- Awarded Peak Performer 1993 of Motorola's Southern Division.

### **Systems Engineer**

(1988 - 1992)

- System Engineer responsible for the design of wireless communication
- Experience in the following system designs and implementation: RF point to point links, Analog and Digital Microwave design and implementation, Data System design Coverage prediction, Two-way repeater systems and Trunked radio systems.

### INDUSTRY SKILLS

- Technology expert CDMA, GSM, WiMAX, P25, Narrowbanding
- Computer propagation and optimization tools: Planet EV, DB Planner, Odyssey and Asset, EDX Signal Pro, Excalibur, MOSAIC, PlotworX, Ericsson's TEMS & FICS,
- GIS mapping tools such as MapInfo, Terrain Navigator, Streets & Trips and Street Atlas.
- Drive testing tools: Agilent, Grayson & MLJ Drive Testing Tools
- FCC Office of Engineering Technology Bulletin 65.
- Microsoft Office: Excel, Word, Visio, Power Point, MS Project

5/5/2015 Exhibit Page 19 of 21

### Case 2:14-cv-01455-RSL Document 32 Filed 05/14/15 Page 41 of 58

### Richard A. Conroy Jr.

### **EDUCATION**

• BS – Electrical Engineering – New Jersey Institute of Technology, Newark, NJ

### **TRAINING**

- Antenna Design Seminars Georgia Technical Institute, Atlanta, GA
- Reviewed Lucent CDMA training course
- Management and Communication Seminars
- M/A-COM Public Safety Training
- R56 Bonding and Grounding Motorola
- Consultant's Training Motorola
- System Integration Institute
- Presenting Technical Information to Customers
- Secure, Astro Conventional & Astro Systems Training
- Sales Training program
- Dispatch Console Design
- Advanced Microwave Design
- Simulcast Design
- Trunked Systems Design

5/5/2015 Exhibit Page 20 of 21

The following is a sample of the RF Expert Testimony provided before the following Zoning / Planning Boards:

Andover South, NJ	Hillsborough, NJ	New Rochelle, NY	Trumbull, CT
Ardsley, NY	Hillsdale, NJ	New Town, CT	Union City, NJ
Bayonne, NJ	Howell, NJ	Newark, NJ	Vernon Twp, NJ
Bedford, NY	Irvington, NY, NJ	Newburgh, NY	Village of Chestnut Ridge, NY
Bergenfield, NJ	Jersey City, NJ	North Plainfield, NJ	W.Haverstraw, NY
Blooming Grove, NY	Kent, NY	Nutley, NJ	Warren Twp, NJ
Brewster, NY	Larchmont, NY	Ossining, NY	Wayne, NJ
Bridgehampton, NY	Lewisboro, NY	Oyster Bay, NY	West Milford, NJ
Bridgewater, NJ	Lindenhurst, NY	Paterson, NJ	White Plains, NY
Bronxville, NY	Madison, NJ	Peekskill, NY	Woodbridge, NJ
Brookhaven, NY	Mahwah, NJ	Pelham Manor, NY	Woodcliff Lake, NJ
Carteret, NJ	Mamoroneck, NY	Perth Amboy, NJ	Yonkers, NY
Centerport, NY	Mansfield, NJ	Pompton Lakes, NJ	Yorktown, NY
Centerville, NY	Massapequa, NY	Portchester, NY	
Clarkstown, NY	Mendham, NJ	Putnam Valley, NY	* Bayonne, NJ
Closter, NJ	Metuchen, NJ	Rahway, NJ	* Bolton, MA
Cortlandt, NY	Mineola, NY	Rhinebeck, NY	* Edison, NY
Cresskill, NJ	Montvale, NJ	Ridgewood, NJ	* Hazlet, NJ
Dobbs Ferry, NY	Moosic, PA	Riverdale, NJ	* Metuchen, NJ
Dover, NJ	Mt. Vernon, NY	Roxbury, NJ	* Sayerville, NJ
E.Brunswick, NJ	Nanuet, NY	Rye, NY	* South River, NJ
E.Freehold, NJ	New Canaan, CT	Sayerville, NJ	* Spotswood, NJ
East Orange, NJ	New Milford, NJ	Scarsdale, NY	* Vernon Twp, NJ
Elmsford, NY	Hillsborough, NJ	Sea Cliff, NY	* Vinal Haven, ME
Emerson, NJ	Hillsdale, NJ	Sleepy Hollow, NY	* West Milford, NJ
Franklin, NJ	Howell, NJ	South Plainfield, NJ	
Goshen, NY	Irvington, NY, NJ	Southhampton, NY	
Hampton, NJ	Jersey City, NJ	Stanford, NY	
Hardyston, NJ	Kent, NY	Tannersville, PA	
Harrison, NY	Larchmont, NY	Tarrytown, NY	
Hastings on the Hudson	Lewisboro, NY	Teaneck, NJ	
Hempstead / Freeport, NY	Lindenhurst, NY	Town of Babylon, NY	

<sup>\*</sup>The following Boards have retained PierCon's RF Engineering Services for the review of wireless applications and/or wireless design services.

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### THOPMSON DECLARATION EXHIBIT B

1 The Honorable Robert S. Lasnik 2 3 4 5 6 7 UNITED STATES DISTRICT COURT 8 WESTERN DISTRICT OF WASHINGTON AT SEATTLE 9 T-MOBILE WEST LLC and INDEPENDENT 10 TOWERS HOLDINGS, LLC, No. 2:14-CV-1455-RSL 11 Plaintiff, SETTLEMENT AGREEMENT 12 ٧. 13 THE CITY OF MEDINA, WASHINGTON, 14 Defendant. 15 The plaintiffs, T-Mobile West LLC ("T-Mobile") and Independent Towers Holdings, 16 LLC ("Independent Towers"), and the defendant, City of Medina, Washington ("City") hereby 17 agree as follows: 18 WHEREAS, Independent Towers entered into a lease agreement with the City for a 19 structure, base station and related wireless communication facilities (collectively, "Proposed 20 Tower") at Fairweather Park and Nature Preserve, located at 2994 Evergreen Point Road, 21 Medina, Washington ("Park"); 22 WHEREAS, T-Mobile entered into a sublease agreement with Independent Towers to 23 locate its antennas and equipment at the Proposed Tower; WHEREAS, on September 25, 2013, pursuant to Medina Municipal Code ("MMC") 25 Chapter 20.37 and Chapter 20.72, and Section 332(c)(7)(B) of the federal Communications Act, 47 U.S.C. § 332(c)(7)(B), Independent Towers applied to the City for a special use permit SETTLEMENT AGREEMENT - 1 Davis Wright Tremaine LLP DWT 26776732v2 0048172-000640

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LAW OFFICES
777 108th Avenue NB, Suita 2300
Bellovue, WA 98004-5149
425.646.6100 main 425 646,6199 fax

and variance to allow the installation, operation and maintenance of the Proposed Tower at the Park ("Application");

WHEREAS, after a public hearing, the City's Hearing Examiner denied the Application due to a lack of substantial evidence to establish that 80 feet was the minimum tower height necessary to avoid a significant service gap on the SR-520 bridge as required by MMC 20.37.070.B.3.b, and after a further hearing on Independent Towers' request for reconsideration, on October 10, 2014 filed with the City Clerk a written decision denying reconsideration and such determination is a "final action";

WHEREAS, T-Mobile and Independent Towers timely appealed under Section 332(c)(7)(B)(v) of the Communications Act, (the "Communications Act"), 47 U.S.C. § 332(c)(7)(B)(v), from the denial by the City of the Application ("TCA Case");

WHEREAS, T-Mobile has produced an expert report that demonstrates that T-Mobile has a significant gap in its ability to provide personal wireless service and that the proposed tower at a height of at least eighty (80) feet above ground level will remedy T-Mobile's significant gap in its ability to provide personal wireless service, and the City has had a third party radio frequency expert confirm the analysis and conclusions in the T-Mobile expert report;

WHEREAS, under the City's Code Sections 20.37.070 and 20.37.080, a personal wireless service facility in the City outside of Fairweather Park, including in the public right of way and the Washington Department of Transportation ("WSDOT"), cannot be taller than thirty five (35) feet above ground level and therefore there is no feasible alternative for locating an 80 foot tower outside of Fairweather Park:

WHEREAS, in an effort to settle the TCA case, Independent Towers has agreed to undertake further improvements to the Park, and the City has concluded that in light of the public interest in promoting collocation of wireless facilities to minimize the number and impact of such facilities and in light of the mitigation measures agreed to by Independent Towers herein, the Proposed Tower and the additional conditions agreed to by Independent

 Towers create the least intrusive means of remedying the significant gap in T-Mobile's service, and therefore, the City has agreed to approve the Application with those mitigating conditions, which are set forth below;

WHEREAS, the Court has subject matter jurisdiction over this case pursuant to 47 U.S.C. §332(c)(7)(B)(5) and 28 U.S.C. §1331;

WHEREAS, federal courts encourage settlement between wireless providers and local jurisdictions with zoning authority in appropriate circumstances; see Brehmer v. Planning Board of the Town of Wellfleet, 238 F.3d 117, 121 (1st Cir. 2001) (under the Communications Act, it is "not unreasonable for the board to settle with the applicant on the terms most favorable to the town"; such settlements "are fully consistent with the [Act]'s aims"); Town of Amherst v. Omnipoint Communications, 173 F.3d 9, 16-17 (1st Cir. 1999) ("[1]t is in the common interest of [zoning hoards] and [telecommunications companies] to find ways to permit the siting of towers in a way most congenial to local zoning"); Patterson v. Omnipoint Communications, Inc., 122 F. Supp. 2d 222, 228 (D. Mass. 2000) (in appropriate circumstances, "it behooves the board to settle with the Plaintiff company on the most favorable terms possible; rather than spend more on litigation, with the potential to receive less favorable terms from a judgment");

WHEREAS, without any admission of fact, law or liability, the parties hereto now desire to settle the above-captioned litigation to permit the Court-ordered construction and operation of the Proposed Tower at the Park in the City of Medina, subject to and on the terms set forth herein;

WHEREAS, there is no just cause for delay and both parties wish to avoid protracted litigation;

NOW THEREFORE, the parties hereto agree to undertake all necessary actions and fulfill all applicable requirements under federal, state and local law on an expedited time frame, including but not limited to the following:

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- 1. Simultaneously with the execution of this Settlement Agreement, the parties hereto will execute the Stipulated Judgment, which is attached hereto as Exhibit \_\_\_\_.
- 2. Plaintiffs will file the Stipulated Judgment in the District Court in the TCA Case within 10 days after execution of this Settlement Agreement.
- 3. After entry of the Stipulated Judgment by the District Court, and pursuant to the Stipulated Judgment, the City will approve the Application and issue the special use permit and variance requested in the Application. The height, design, and other characteristics of the Proposed Tower shall be approved by the City as specified in the Project Drawing Plans submitted with the Application.
- 4. Pursuant to the Stipulated Judgment, the City's approval of the Application will be conditioned upon and subject to Independent Towers mitigating the impacts on the use of Park property by constructing the following improvements: (a) Field Re-Surfacing as specified in Exhibit A attached hereto; and (b) Drainage System as specified in Exhibit B attached hereto (collectively "Mitigation Improvements"). The Mitigation Improvements shall be constructed by Independent Towers at its sole cost and expense, by such contractors or subcontractors as Independent Towers may choose in its sole discretion, subject to the specifications set forth in Exhibits A and B attached hereto. Independent Towers will be responsible for obtaining relevant construction permits. The City will have the right to confirm that the Mitigation Improvements are being performed to the specifications identified in Exhibits A and B hereto and any conditions set forth in the permits.
- 5. The City agrees to stay any enforcement action against the existing temporary Independent Towers and T-Mobile wireless communications facility located in the Park and to allow such temporary facility to continue in operation until the Proposed Tower is completely constructed as contemplated in this Settlement Agreement and T-Mobile has installed and commenced operation of its personal wireless services

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1 2 antennas and equipment on such Proposed Tower as contemplated in this Settlement Agreement.

- 6. The City agrees that money originally designated for lighting purposes currently held in escrow in connection with the lease entered into between Independent Towers and the City shall be released to Independent Towers.
- 7. The parties hereto each agree to support the terms of this Settlement Agreement and the Stipulated Judgment, and to take all actions and execute all documents as may be reasonably necessary to carry out the terms of this Settlement Agreement and the Stipulated Judgment.
- 8. In the event Intervenors oppose this Settlement Agreement or the Stipulated Judgment, Plaintiffs and the City will support the request for the District Court to approve this Scttlement Agreement and the Stipulated Judgment, but it is understood further that Independent Towers and T-Mobile will be responsible for taking the lead in defending this Agreement and the Stipulated Judgment, provided that in the event required and if requested by Independent Towers and T-Mobile, the City agrees to prepare and file with the Court such documents as are reasonably necessary to support this Agreement and the Stipulated Judgment. The City shall refrain from taking any action to oppose this Agreement or the Stipulated Judgment or that may be contrary to the terms of this Agreement.
- 9. If the Court in the TCA Case refuses to accept this Settlement Agreement and enter the Stipulated Judgment, the terms of this Settlement Agreement shall become null and without effect.
- 10. Each party hereto represents and warrants that this Agreement has been duly authorized by all necessary votes, actions, and other requirements of each party, and constitutes a legal, valid and binding obligation in accordance with its terms, and that no consent or permission related to the obligations assumed in this Agreement is required under any covenant, agreement or encumbrance or under any law or

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regulation of any governmental entity or jurisdiction. Without limitation, the undersigned Counsel represent and warrant that they have been authorized by their respective clients to execute and do hereby execute this Agreement settling the TCA 11. The rights and obligations of the parties to this Agreement shall be construed and

- enforced in accordance with the Telecommunications Act and, subject thereto, in
- 12. This Agreement constitutes the entire agreement with respect to the subject matter hereof and supersedes all prior and contemporaneous oral and written agreements
- 13. The City, Independent Towers and T-Mobile agree to cooperate and to act in good
- 14. The individuals executing this Settlement Agreement on behalf of the respective Parties have express and lawful authority to do so, and it may be executed in

INDEPENDENT TOWERS HOLDINGS, LLC

T-MOBILE WEST LLC

Senior Director, Engineering Development

Digitally signed by Melanie Kiely Date: 2015.05.07 13:08:05 -07'00'

Davis Wright Tremaine LLP LAW OFFICES 777 108th Ayense NE, Subs 2300 Bellevie, WA 94004-5149 425.646.6100 main 425.646.6199 fex

### U.S. District Court Western District of Washington at Seattle

NO. 2:14-CV-1455-RSL

T-Mobile West LLC and Independent Towers Holdings, Inc.
vs.
The City of Medina, Washington

### SETTLEMENT AGREEMENT

**EXHIBIT A Field Resurfacing** 

## City of Medina

Fairweather Park Athletic Field Improvement

## Project Description

			A. Field Re-surfacing, Irrigation and Drainage System
Item No	Description	Unit	Proposed Project Elements: Install sand based surface and sand subgrade to help alleviate wet field conditions
			Quantity
	Total Field Area (SF) = $ 31,360 $		
FIELD R	TELD RE-SURFACING		
	Install sand 6" deep throughout field area	SF	31,360
	Install playfield soil 6" deep throughout field area including reseeding	SF	31,360

### U.S. District Court Western District of Washington at Seattle

NO. 2:14-CV-1455-RSL

T-Mobile West LLC and Independent Towers Holdings, Inc. vs.

The City of Medina, Washington

### SETTLEMENT AGREEMENT

**EXHIBIT B Drainage System** 

### City of Medina

# Fairweather Park Athletic Field Improvement Project Description

Description         Unit           INAGE SYSTEM         Total Field Area (SF) = 31,400         I.S           Mobilization         I.S         I.S           TESC         I.S         I.S           Layout         I.S         I.F           2" Diameter Perforated Plastic Tubing         I.F           8" Diameter Perforated Plastic Tubing         I.F           Clean Out         Corn           Clean Out         Corn           Drainage Material, 3/4" Gravel         CY           Sand         Connect to Existing Catch Basin         EA           Reseeding         I.S				C. Drainage System
EM           EM         Total Field Area (SF) = 31,400         LS           Interpretation of the control of th	Item No	Description	Unit	Proposed Project Elements: Install underdrain system to alleviate wet field conditions
EM         Total Field Area (SF) = 31,400         LS           In         LS           In         LS           In         LS           In         LS           In         LS           In         LF           Perforated Plastic Tubing         LF           Perforated Plastic Tubing         LF           Plastic Pipe         EA           8"X8"x8" X8" Diameter         EA           8" Diameter         EA           Sover         EA           Avation Incl. Haul         CY           aterial, 3/4" Gravel         CY           Existing Catch Basin         EA           Existing Catch Basin         LS           In         LS				Quantity
EM         EM           1         LS           1         LS           Perforated Plastic Tubing         LF           Perforated Plastic Tubing         LF           Plastic Pipe         LF           Plastic Pipe         EA           8"x8"x8" x8" Diameter         EA           8" Diameter         EA           sover         EA           avation Incl. Haul         CY           avation Incl. Haul         CY           Existing Catch Basin         EA           Existing Catch Basin         EA           LS         LS		II		
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Perforated Plastic Tubing Plastic Pipe "x8"x8" Diameter  "Diameter  Diameter  EA  EA  EA  over  vation Incl. Haul  cerial, 3/4" Gravel  cisting Catch Basin  EIS  EA  EA  EA  EA  EA  EA  CY  CY  CY  CY  CY  CY  CY  CY  CY  C		2" Diameter Perforated Plastic Tubing	LF	2040
Plastic Pipe         LF           "x8"x8" x8" Diameter         EA           "Diameter         EA           voer         EA           vation Incl. Haul         CY           cerial, 3/4" Gravel         CY           xisting Catch Basin         LS           LS         LS		8" Diameter Perforated Plastic Tubing	LF	340
"x8"x8" x8" Diameter       EA         "Diameter       EA         over       EA         vation Incl. Haul       CY         cerial, 3/4" Gravel       CY         xisting Catch Basin       EA         xisting Catch Basin       LS			LF	30
" Diameter         EA           vver         EA           ration Incl. Haul         CY           cerial, 3/4" Gravel         CY           .xisting Catch Basin         EA           LS         LS		"Y" Fitting, 8"x8"x8" Diameter	EA	1
over         EA           ration Incl. Haul         CY           cerial, 3/4" Gravel         CY           xisting Catch Basin         EA           LS         LS		Tee Fitting, 8" Diameter	EA	1
Out Cover the Excavation Incl. Haul age Material, 3/4" Gravel cet to Existing Catch Basin cding  Cy		Clean Out	EA	17
ing Excavation Incl. Haul CY  age Material, 3/4" Gravel CY		Clean Out Cover	EA	17
age Material, 3/4" Gravel CY Existing Catch Basin EA LS CIN CY		Trench Excavation Incl. Haul	CY	20
ect to Existing Catch Basin EA EA CY CY CY CA CAING		Drainage Material, 3/4" Gravel	CY	14
Existing Catch Basin EA LS		Sand	CY	40
T'S T'S			EA	1
			ΓS	1

### U.S. District Court Western District of Washington at Seattle

NO. 2:14-CV-1455-RSL

T-Mobile West LLC and Independent Towers Holdings, Inc. vs.

The City of Medina, Washington

### **SETTLEMENT AGREEMENT**

**EXHIBIT C Stipulated Judgment** 

The Honorable Robert S. Lasnik 1 2 3 4 5 6 7 UNITED STATES DISTRICT COURT 8 WESTERN DISTRICT OF WASHINGTON AT SEATTLE 9 T-MOBILE WEST LLC and INDEPENDENT 10 TOWERS HOLDINGS, LLC, No. 2:14-CV-1455-RSL 11 Plaintiff, STIPULATED JUDGMENT AND ORDER 12 v. THE CITY OF MEDINA, WASHINGTON, 13 14 Defendant. 15 16 17 Pursuant to Section 332(c)(7) of the Communications Act of 1934, as amended, 47 18 U.S.C. § 332(c)(7) (the "Communications Act" or "Act")), the parties' Settlement Agreement 19 filed with this Court, the documents and information submitted in this action, and based on 20 applicable law, the Court finds and orders as follows: 21 Plaintiffs T-Mobile West LLC ("T-Mobile") and Independent Towers Holdings, LLC 22 ("Independent Towers") (collectively "Plaintiffs") allege that Defendant City of Medina, 23 24 Washington ("Defendant" or "City") unlawfully denied Plaintiffs' application to construct a 25 wireless telecommunications facility in Medina. Plaintiffs allege that the City's denial is not 26 supported by substantial evidence contained in a written record and effectively prohibits 27

personal wireless service in the vicinity of the proposed facility, all in violation of Section 332(c)(7)(B) of the Act.

Plaintiffs and Defendant have entered into and executed a Settlement Agreement to settle and resolve the claims by Plaintiffs in this matter.

This Court has subject matter jurisdiction over this case pursuant to 47 U.S.C. §332(c)(7)(B)(5) and 28 U.S.C. §1331.

In light of the agreement of the Parties in the Settlement Agreement, , the Court holds that T-Mobile has a significant gap in its ability to provide personal wireless service in an area around Fairweather Park, and the terms of the Settlement Agreement are the least intrusive means of remedying T-Mobile's significant gap in service. Accordingly, pursuant to 47 U.S.C. § 332(c)(7)(B)(i)(II), failure to allow Plaintiffs to construct the proposed tower, as set forth in the Settlement Agreement, would effectively prohibit T-Mobile from providing wireless service in violation of 47 U.S.C. § 332(c)(7)(B)(i)(II).

Therefore, IT IS ORDERED that within 21 days after the entry of this Stipulated Judgment, the Defendant shall grant Independent Towers' Application for a special use permit and variance to allow the installation, operation and maintenance of an eighty (80) foot tall monopole at the Fairweather Park and Nature Preserve, located at 2994 Evergreen Point Road, Medina, Washington ("Park"), as set forth in Independent Towers' application, subject only to the following conditions: Independent Towers shall mitigate the impacts on the use of Park property by constructing the following improvements: (a) Field Re-Surfacing as specified in Exhibit A attached hereto; and (b) Drainage System as specified in Exhibit B attached hereto (collectively "Mitigation Improvements"). The Mitigation Improvements shall be constructed by Independent Towers at its sole cost and expense, by such contractors or subcontractors as Independent Towers may choose in its sole discretion, subject to the specifications set forth in

Exhibits A and B to the Settlement Agreement. Independent Towers will be responsible for obtaining relevant construction permits. The City will have the right to confirm that the Mitigation Improvements are being performed to the specifications identified in Exhibits A and B to the Settlement Agreement and any conditions set forth in the permits.

IT IS FURTHER ORDERED that The City shall not take any enforcement action against the existing temporary Independent Towers and T-Mobile wireless communications facility located in the Park and shall allow such temporary facility to continue in operation until the Proposed Tower is completely constructed as contemplated in this Stipulated Judgment and the Parties Settlement Agreement and T-Mobile has installed and commenced operation of its personal wireless services antennas and equipment on such Proposed Tower as contemplated in this Stipulated Judgment and the Parties Settlement Agreement.

IT IS FURTHER ORDERED that as a result of the Defendant's action in response to this Order, granting the Independent Towers' Application, Independent Towers shall be authorized to construct, operate, maintain, and use a personal wireless service facility located at the Park, as proposed in its Application to the City that is the subject of this action. No other relief except that provided according to the provisions of this Judgment and the Settlement Agreement entered into by the parties is granted hereby. No costs and/or attorney's fees are to be sought by or awarded to any party.

Dated: May , 2015

Respectfully submitted,

/s/ Linda Atkins

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	STIPULATED JUDGMENT AND ORDER - 4 DWT 26776693v2 0048172-000640	Davis Wright Tremaine LLP LAW OFFICES 777 108th Avenue NE Suite 2300
27	Dated:, 2015	
26		United States District Court
25		Judge Honorable Robert S. Lasnik
24		
23		
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